crease in thickness of this corallite being made up by the increased size of the non-septate interior. For this larger species I would propose the name *Ethmophyllum Whitneyi*, in honour of Prof. J. D. Whitney, to whom I am indebted for the use of the specimens.

Of the other species I have seen but a single specimen, which is imperfect at both extremities, about 2·15 inches in length, and only about 0·20 inch in diameter at the larger end, and 0·15 at the smaller, with some 24 to 28 septa. In addition to its much more slender form, it differs from the other species in having its septa so strongly waved laterally as almost to divide the interseptal spaces into cells, nearly to the outer wall. For this, if it should prove to be a distinct species, I would propose the name *Ethmophyllum gracile.*

The specimens were all obtained at Silver Peak, Nevada, and were discovered by Mr. Clayton.—*Silliman's American Journal*, January, 1868.

Note on the Polymorphism of the Anthozoa *and the Structure of the* Tubiporæ. By A. Kölliker.

The polymorphism of individuals, so remarkable among the Acalephæ, has had nothing corresponding to it among the other Cœlenterata; it is therefore a very unexpected discovery that M. Kölliker has lately made, of a true polymorphism in various genera of Anthozoa Alcyonaria. This polymorphism consists in the existence, besides the large individuals capable of taking nourishment and furnished with generative organs, of other, smaller, asexual individuals, which appear essentially to preside over the introduction of sea-water into the organism, and then over its expulsion, and which are perhaps at the same time the seat of an excrementitial secretion. Like the others, these asexual individuals possess a body-cavity divided into chambers by eight septa, and a pyriform stomach with two orifices. On the other hand they are entirely destitute of tentacles; and instead of the eight ordinary mesenteric filaments there are only two, supported upon two consecutive septa. The cavity of the body of these individuals is always in communication with that of the sexual individuals; but the mode in which this communication is effected is liable to vary with the genera.

We may distinguish two types in the mode of distribution of the asexual individuals upon the polyparies. In the first they are distributed in great abundance over the whole polypigerous region of the polypary, among the sexual individuals. This is the case in certain Alcyonids which M. Kölliker refers to the genus *Sarcophyton*, and also in *Veretillum*, *Lituaria*, *Cavernularia*, and *Sarcobelemnon*. In the second case the asexual individuals are restricted to certain perfectly definite places, which, however, are variable according to the genera. Thus in certain species of *Pteroeides* they occur on the lower surface of the pennate leaves of the region serving for attachment, in the form of a larger or smaller plate; in other species of the same genus they are also found at the apex of the polypary; in

the *Pennatulæ* the varicosities of the trunk correspond to the places where the asexual individuals are seated; *Funiculina quadrangularis* shows them arranged in longitudinal rows between the sexual individuals; lastly, the *Virgulariæ* always present behind each lamella, upon their trunk, a simple transverse row of asexual individuals.

It is probable that all the Pennatulidæ present a similar dimorphism; at least, in *Renilla* we see, between the fully developed polypes, rudimentary bodies which seem to be individuals of a different form. On the other hand, with the sole exception of the genus *Sarcophyton*, M. Kölliker has sought in vain for dimorphism in the Alcyonidæ and Gorgonidæ. It must not be forgotten, however, that there seem to exist some relations between the buds of the sexual and asexual individuals in the polymorphic polyparies; for, in *Veretillum* at least, the asexual individuals seem, under certain conditions, capable of being transformed into sexual individuals.

M. Kölliker has also been able to investigate a polypary of *Tubipora*, still enveloped by the soft parts, obtained from the Fiji archipelago. Notwithstanding the great resemblance of the polyparies of the *Tubiporæ* to those of the Madripores, the author considers that in their whole structure and development these polypes are Alcyonaria which must occupy a place by the side of the genus *Clavularia*. Both the tentacles and the body of the polypes of *Tubipora* contain spicules.—*Würzburger Zeitung*, January 4, 1868; abstract by E. Claparède in *Bibl. Univ.* February 15, 1868, *Bull. Sci.* p. 171.

On the Saliva and Salivary Organs of Dolium galea *and other Mollusca.* By MM. S. de Luca and P. Panceri. (Note by E. Claparède.)

Ten years ago M. Troschel made the unexpected discovery of the presence of a considerable quantity of free sulphuric acid in the saliva of a Gasteropod, namely *Dolium galea*. MM. de Luca and Panceri have lately resumed the investigation of this subject, and have confirmed, in their general features, the results obtained by their predecessor. They find the quantity of free anhydrous sulphuric acid varying from 3·3 to 3·42 per cent., a quantity which is even a little more than that ascertained by M. Troschel. On the other hand the Neapolitan naturalists have found no trace of free hydrochloric acid, whilst the analysis formerly made by Boedeker at the request of Troschel indicated 0·4 per cent. of this.

It was interesting to ascertain how far this phenomenon is isolated. MM. de Luca and Panceri have for this purpose investigated the saliva of various mollusca, and found free sulphuric acid in notable proportion in four species of *Tritonium*, in a *Cassis*, a *Cassidaria*, two *Murices*, and an *Aplysia*. Moreover in all these mollusca, including the *Dolium*, these naturalists have seen a gas evolved from the salivary liquid at the moment of the rupture of the gland. This gas was found to be pure carbonic acid, and its volume in one case amounted to as much as 20·6 cubic centimetres from a gland of about 75 grammes in weight.